

- 3) Safety is not as big of a concern with modular block wall, or MSE wall, construction. Construction of the MSE wall is one level at a time and does not force workers to be placed into a deep, confined location exposed to the danger of slope failure.
- 4) The construction contract time of 150 days was considered short and became a major concern which factored into higher bid prices.
- 5) Use of the Oklahoma Department of Transportation (ODOT) pre-qualification list eliminated some smaller contractors which could perform the work adequately but for various reasons have not become pre-qualified through ODOT.

After studying the information above, staff developed the following plan of action with respect to the project:

- 1) Reach out to outside experts to review current conditions and make recommendations for a solution which would meet the City's budget constraints.
- 2) Increase the construction contract time from 150 days to 180 days.
- 3) Provide additional permanent right-of-way or temporary construction easement at the top of the wall.
- 4) Remove the ODOT pre-qualification requirement from the future re-bid of the project.

Staff reached out to several retaining wall design experts to discuss the project. The proposed concrete wall design, as well as the coinciding geotechnical report were provided for their peer review and to make recommendations. The experts in question made no recommendations to change the concrete wall design. A consensus was reached that an MSE wall design either a small block as is currently in place or a large block wall could be designed to adequately withstand the loads, hydrostatic pressures, and existing geotechnical conditions found at the current Hillside Drive wall location. It was also a consensus the cost of a properly designed MSE wall would be significantly less than the previously designed, bid and rejected concrete retaining wall.

With this information and in hopes of developing a design which would fit within the City's budget constraints, the Engineering and Construction staff teamed with a consultant, whose expertise lies in MSE wall design, to create set of construction plans for replacement of the existing Hillside Drive retaining wall. Instead of the small block style similar to the existing wall, a large block style design was chosen for several reasons. The large blocks are a heavier, more substantial design. Large blocks are also able to withstand vehicular impacts with little or no damage to the block itself.

With both the concrete wall design and the MSE large block wall design in hand, the Engineering and Construction Department proposes to bid the ST2034 Hillside Drive Retaining Wall Replacement project as one bid package with Schedule A and Schedule B options. This method allows perspective bidders to bid either Schedule A, the concrete wall, or Schedule B, the MSE large block wall, with only one Schedule possibly being awarded. Bidding the project as such, it is anticipated to increase the pool of perspective bidders thereby providing more competitive bidding. It will also provide construction options which should fall within the City's budget and meet accepted engineering design criteria as well as safety standards.

Another way to increase the perspective bidders pool, thereby increasing the probability of more competitive bidding, is to consider removing the ODOT pre-qualification requirement.

Staff recommends bidding the Hillside Drive Retaining Wall project with a Schedule A and a Schedule B option. We also recommend removing the ODOT pre-qualification restriction.

Cost: \$0

Funding Source: N/A

Requested By: Ethan J.L. Edwards, Director of Engineering and Construction

Approved By: City Manager's Office

Attachments: Cross sections, plan view, aerial details of wall

Recommendation:

Approve and authorize design and bidding considerations regarding the Hillside Drive Retaining Wall Replacement Project with a Schedule A and a Schedule B option as well as no ODOT pre-qualification requirement (ST2034)